

## METHODS AND SYSTEMS FOR DEVELOPING DATA FLOW PROGRAMS

### ABSTRACT OF THE DISCLOSURE

Methods, systems, and articles of manufacture consistent with the present invention provide a development tool that enables computer programmers to design and develop a data flow program for execution in a multiprocessor computer system. The tool allows the programmer to define a region divided into multiple blocks, wherein each block is associated with data operated on by code segments of the data flow program. The development tool also maintains dependencies among the blocks, each dependency indicating a relationship between two blocks that indicates that the portion of the program associated with a first block of the relationship needs the resultant data provided by the portions of the program associated with a second block of the relationship. The development tool supports several optimization commands, including analyzing node execution patterns and characteristics, and modeling the effect of changes in node execution time and node data.